Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

their development and yet protect the interests of the public.

THE *Medical Record* states that the specimens added to the Hunterian Museum during the last twelve months include an important collection illustrating cancer in mice, presented by the Imperial Research Fund. Sir Henry Butlin has given his drawings showing the appearances of this disease and conditions which may be mistaken for it. The tuberculosis commission has given a series of specimens showing the experimental production of that disease. Additions have also been made to the pathological and gynecological collections.

UNIVERSITY AND EDUCATIONAL NEWS

MR. JOHN G. ARCHBOLD has made a further gift of $40,000 to Syracuse University.

GOVERNOR DIX has approved two bills passed by the recent New York Legislature, one appropriating $140,000 for the Oswego Normal School, and one appropriating $50,000 for an Agricultural College, Cobleskill.

UPON recommendation of President Hutchins, of the University of Michigan, a committee consisting of three members of the board of regents, and five members chosen from the literary, medical and engineering faculties, has been appointed to make recommendations concerning a thorough reorganization of the graduate school. Also upon the president's recommendation, a resolution has passed the board of regents which makes it the duty of the committee of the board for each department acting with the president and the dean of the department to examine into the record of each member of the teaching force not later than February of each year "with a view of ascertaining what each member of said force is accomplishing in the field of his specialty, and as to the effectiveness of each as an instructor. The object is that the board may have the data for its guidance and information in regard to the question of promotion and retention in service of the members of the different faculties."

THE medical school in Shanghai will open its doors in February, 1912, under the auspices of the Harvard Medical School. Dr. Martin R. Edwards will be the head and will have a corps of fifteen assistants, most of them Harvard graduates.

THE following changes in the teaching force of the medical department of the University of Pennsylvania are announced in the *Journal* of the American Medical Association: Dr. G. T. Thomas to be associate professor of applied anatomy; Dr. George William Norris to become assistant professor of medicine in place of the late Dr. Aloysius O. J. Kelly; Drs. Joseph Rex Hobensack, William E. Quicksall, Penn-Gaskell Skillern and Nate Ginsburg to become assistant demonstrators in anatomy; Dr. Oscar H. Plant to become demonstrator of pharmacology; Dr. James H. Austin, demonstrator in pathology, to become associate in research medicine; Dr. A. B. Eisenbrey, associate in research medicine, to become instructor in surgery; Dr. James S. Hickey, absent on leave, will resume duty as assistant in physiology.

PROFESSOR J. I. D. HINDS, of the Peabody College, Nashville, has been elected professor of chemistry at Cumberland University.

DR. HERMAN M. ADLER has been appointed instructor in mental diseases at the Harvard Medical School, and will be no longer officially connected with the department of pathology or neuro-pathology. He will retain the position of pathologist at the Danvers State Hospital.

AT the New Mexico College of Agriculture and Mechanic Arts Mr. H. S. Hammond, assistant professor of biology, has been advanced to be associate professor and acting head of the department to fill the vacancy caused by the resignation of Professor E. O. Wooton, who enters the government service. Mr. D. E. Merrill, of the State University of Iowa, has been appointed assistant professor in the department.

MR. AUGUSTUS L. BARKER, M.Sc. (Alabama), has been appointed instructor in biol-

ogy in the University of Alabama to take the place recently vacated by Mr. James J. Durrett.

DR. F. B. DAINS has resigned the professorship of chemistry in Washburn College to accept an associate professorship of chemistry, in charge of organic chemistry in the University of Kansas.

PROFESSOR KARL PEARSON, F.R.S., has been appointed to be the first occupant of the chair of eugenics in the University of London, established by the legacy bequeathed for that purpose by the late Sir Francis Galton.

DR. ERHARD SCHMIDT, professor of mathematics at Erlangen, has been called to Breslau.

DISCUSSION AND CORRESPONDENCE

THE AIR WE BREATHE IN BUILDINGS

TO THE EDITOR OF SCIENCE: In a recent number of SCIENCE Dr. Gulick asks several questions with regard to the behavior of aqueous vapor in the air, and particularly as to the reason why air when heated becomes drier. All of his questions could be answered by any competent physicist, or could be resolved by reference to any good text-book of physics or of meteorology. But unfortunately, in these days of over-specialization, the language is apt to be too technical, or in the text-books the information too scattered, to be readily found and comprehended by the general reader. Hence the following explanations may be of some use to him and others in a like position.

There are two popular misconceptions, which it is necessary first to dispel. To begin with, few people seem to understand why water is wet. They think, moreover, that because *water* is wet, the same is true of ice and of aqueous vapor. Now this is not the case. Both ice and aqueous vapor are themselves *dry*. They *become* wet, only when they turn to water, ice when it melts, aqueous vapor when it condenses. Hence of the three water is alone wet, and all real moisture is due to the presence of water. So dry is aqueous vapor that it will dry any moist object that it comes in contact with, just as would superheated steam or a dry gas, which in fact are only other names for the *same* thing. Only, we give the name superheated steam to the vapor when the temperature and pressure are much above those of the atmosphere, as in the case of a steam boiler. Of course we must distinguish between the vapor itself, which is a true gas, dry and transparent, and the cloud or mist into which it condenses, on issuing from a locomotive. Hence it is, strictly speaking, incorrect to talk of the moisture or humidity in the air. There never is any moisture or humidity in the air, unless it be such cloud or mist. The described fallacy therefore consists in identifying things which are different, and distinguishing things which are the same—identifying moisture, humidity and water vapor—and distinguishing water-vapor, superheated steam, and dry gas—which are the same.

The second misconception consists in speaking of the *air* as moist or dry—an error not likely to be dispelled by the language of the text-books, which include sections on the "Hygrometric Condition of the Atmosphere." Dr. Gulick falls victim to this misconception when he seeks to explain the apparent drying of the air on heating as due to some *action* of the air on the contained moisture. Thus he says (p. 327), that on heating the air from 32° to 70°—"It appears that one of two things must have happened—either the heat must have contracted the existing moisture or the capacity of the air for moisture has been vastly increased by the rise in temperature." As a matter of fact neither happened, and, moreover, the air had nothing whatever to do with the matter. The same thing would have occurred if the air had been entirely absent, the aqueous vapor alone present. That is to say, aqueous vapor which at 32° seemed relatively moist, would become apparently drier if heated to 70°, whether the space filled by it were simultaneously occupied by air or not. This independence of the substances was first deduced theoretically by Dalton, afterwards established experimentally by Regnault, at least with a high degree of approximation. Hence it is a change in the condition of the aqueous vapor, not of the air, to which the